



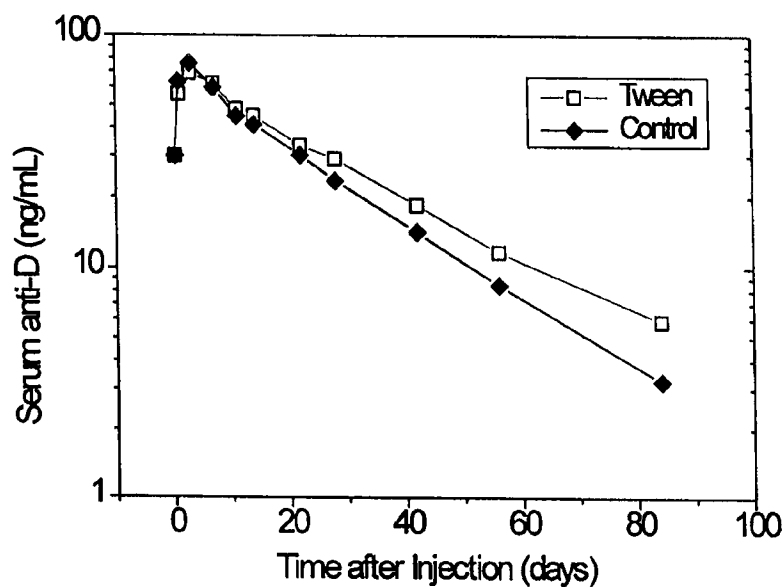
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A61K 39/395	A3	(11) International Publication Number: WO 98/44948 (43) International Publication Date: 15 October 1998 (15.10.98)
(21) International Application Number: PCT/CA98/00325 (22) International Filing Date: 7 April 1998 (07.04.98) (30) Priority Data: 60/041,921 7 April 1997 (07.04.97) US (71) Applicant (for all designated States except US): CANGENE CORPORATION [CA/CA]; 104 Chancellor Matheson Road, Winnipeg, Manitoba R3T 2N2 (CA). (72) Inventors; and (75) Inventors/Applicants (for US only): PRICE, Hugh, W. [CA/CA]; 350 Kingston Crescent, Winnipeg, Manitoba R2M 0T8 (CA). WOLOSKI, B., Michael, R. [CA/CA]; Cangene Corporation, 104 Chancellor Matheson, Winnipeg, Manitoba R3T 2N2 (CA). (74) Agent: BERESKIN & PARR; 40th floor, 40 King Street West, Toronto, Ontario M5H 3Y2 (CA).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> (88) Date of publication of the international search report: 11 February 1999 (11.02.99)

(54) Title: INTRAVENOUS IMMUNE GLOBULIN FORMULATION CONTAINING A NON-IONIC SURFACE ACTIVE AGENT WITH IMPROVED PHARMACOKINETIC PROPERTIES

(57) Abstract

Addition of a non-ionic surface active agent to an immune globulin formulation extends the serum half-life of relatively pure and non-aggregated immune globulin suitable for intravenous injection or infusion. The non-ionic surface active agent may be a sorbitan ester or a polyoxyethylene sorbitan ester of a fatty acid. Formulations of the present invention is therapeutically advantageous over conventional formulations in that an extended serum half-life of the immune globulin improves its therapeutic effectiveness, reduces the frequency of drug administration and/or lowers the therapeutic effective dosage required and cost of treatment.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 98/00325

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61K39/395

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 A61K C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 278 422 A (GREEN CROSS CORPORATION) 17 August 1988 see the whole document ---	1-21
A	WO 95 01155 A (UNILEVER PLC) 12 January 1995 see the whole document ---	1-21
A	EP 0 764 447 A (BAYER CORPORATION PITTSBURGH) 26 March 1997 see the whole document ---	1-21
A	CA 2 151 409 A (PURISSIMUS) 6 November 1996 see the whole document ---	1-21
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"&" document member of the same patent family

Date of the actual completion of the international search

24 November 1998

Date of mailing of the international search report

08/12/1998

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/CA 98/00325

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication where appropriate, of the relevant passages	Relevant to claim No.
A	KALEVI J.A. ET AL.: "Modulation of antibody kinetics by the cell membrane active agent tween 80 in vivo" ANTICANCER RESEARCH, vol. 16, no. 6b, 1996, pages 3542-3550, XP002085447 see the whole document ---	1-21
A	EP 0 318 081 A (AKZO N.V.) 31 May 1989 cited in the application see the whole document ---	1-21
A	EP 0 073 371 A (CUTTER LABORATORIES INC.) 9 March 1983 cited in the application see the whole document -----	1-21

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CA 98/ 00325

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claims 18-21 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 98/00325

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